COMMON WELDING PROCESSES

PROCESS	USED FOR	SHIELDING	SMOKE/FUME	LIGHT/RADIATION	SPECIFIC HAZARD
Stick (SMAW)	General purpose; more than 50% of all welding	Electrode coating	High	moderate-variable	Depends on electrode, e.g., low hydrogen-fluorides, stainless steel-nickel
MIG (GMAW)	High production /automation	Inert gas (argon, helium, CO_2)	Moderate	High-especially with reflective metal and argon shield	Ozone, CO (with CO_2 shield), stainless steel-chromium and nicke
TIG (GTAW)	High precision	Inert gas	Low	High	Ozone, light
Plasma (PAW)	Process can be used to weld, cut, metal spray	Gas	Moderate/high	Moderate/high	Noise, electrical shock, potential X-radiation
Sub Arc (SAW)	Horizontal welds, high production	Granular flux	Low	No visible arc unless have "breakthrough"	Generally low hazard
Air Arc (AAW)	"Gouging," weld preparation	None	Very high	High	Noise, high fume levels
Flux Core (FCW)	High production /automation, e.g., MIG with flux filled wire	Wire filling with or without gas	High	Moderate/high	High fume levels
Oxyacetylene (OAW)	Thin to medium thickness metals, steel and non-ferrous in all positions	Filler rod coating	Low/moderate	Low	Compressed gas cylinders; depends on filler rod, e.g., silver brazing-cadmium